

Sepsis and Systemic Infection Following Transrectal Prostate Biopsy: A Call for Developing Practices

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Dear Editor,

We wish to highlight a growing concern in urological practice about the increasing rates of sepsis and systemic infections following transrectal ultrasound-guided prostate biopsy (TRUS-PB). Despite being the traditional gold standard for prostate cancer diagnosis, the transrectal method is progressively associated with severe infectious complications, primarily driven by the global rise in antimicrobial resistance.

Factually, experimental antibiotic prophylaxis, most commonly with fluoroquinolones, was highly effective in preventing post-biopsy infections. However, the increasing prevalence of fluoroquinolone-resistant extended-spectrum beta-lactamase (ESBL)-producing *Escherichia coli* in the rectal flora has meaningfully altered the safety profile of this process. Recent literature suggests that post-TRUS biopsy infectious complication rates are climbing, leading to preventable hospital admissions, intensive care unit stays for urosepsis, and, in severe cases, life-threatening septic shock.¹

This disturbing trend requires a pattern shift in how we methodize prostate biopsies. To mitigate the risk of systemic infection, several plans must be actively integrated into standard clinical pathways:

1. Targeted Antibiotic Prophylaxis: Routine pre-biopsy rectal swabs should be performed to tailor antibiotic prophylaxis based on individual patient flora and local resistance antibiograms, rather than relying solely on experiential regimens.²

2. Transition to Transperineal Biopsy: Opting for a transperineal approach eliminates the need to pass through the contaminated rectal mucosa. Accumulating sign demonstrates that transperineal biopsy carries a minimal risk of sepsis, even when performed under local anesthesia, making it a safer alternative that should be strongly advocated and widely adopted.³

3. Augmented Prophylaxis: In condition where TRUS-PB remains the only viable option, temporary use of

augmented prophylaxis (such as combining a fluoroquinolone with an aminoglycoside or cephalosporin) based on local epidemiological data may be necessary.⁴

As clinicians, our primary commitment is to patient care. The continued reliance on experimental prophylaxis for transrectal biopsies in the face of rising antimicrobial resistance is a practice that requires urgent re-evaluation. We urge urological societies and formal guidelines to strongly recommend targeted prophylaxis and facilitate the transition towards transperineal prostate biopsies to minimize the burden of post-biopsy sepsis.

We welcome further discussion on this serious issue and encourage fellow practitioners to share their institutional experiences and infection control plans.

Conflict of Interest Disclosures

The author declares no conflict of interest.

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